● PRINTER RUSH ●

(PTO ASSISTANCE)

Application :	09/819070	**Examiner :**	Picard	**GAU :**	2125
From:	PAP	**Location:**	(IDC) FMF FDC	**Date:**	6/28/05

Tracking #: 0607168 Week Date: 2/7/05

DOC CODE	DOC DATE	MISCELLANEOUS
☐ 1449		☐ Continuing Data
☐ IDS		☐ Foreign Priority
☐ CLM		☐ Document Legibility
☐ IIFW		☐ Fees
☐ SRFW		☐ Other
☑ DRW	1/8/2001	
☐ OATH		
☐ 312		
☐ SPEC		

[RUSH] **MESSAGE:** Attention Chief Draftsperson: Please supply new drawing sheets for Figures 11, 34, 36 - data crossed out and corrected by hand. See REM of 1-8-01.

Thank you.

[XRUSH] **RESPONSE:** Corrected Drawings 12-12-05

INITIALS: JDC

NOTE: This form will be included as part of the official USPTO record, with the Response document coded as XRUSH.

REV 10/04

FIG. 17

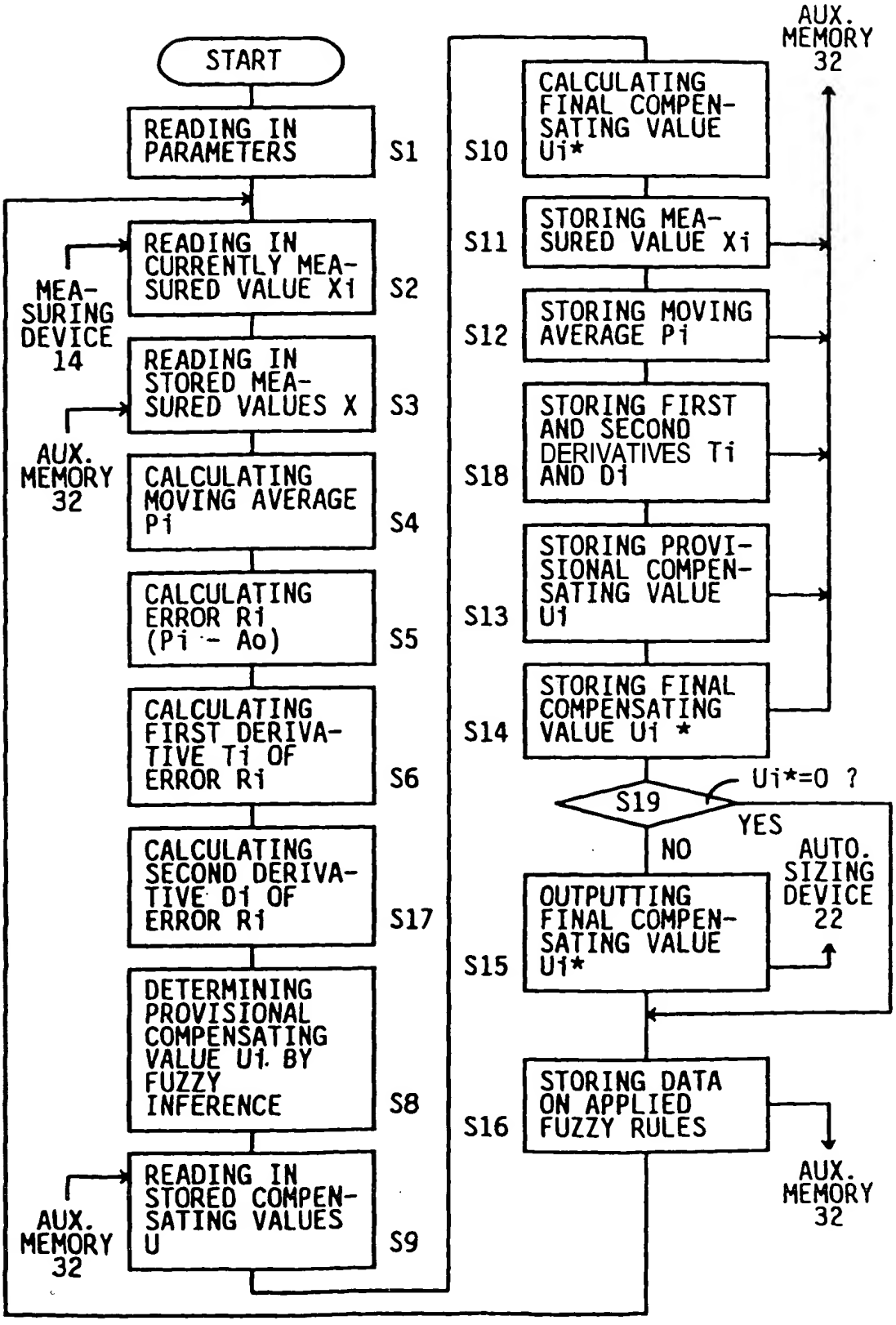

START
READING IN PARAMETERS
S1
READING IN CURRENTLY MEASURED VALUE Xi
S2
MEASURING DEVICE 14
READING IN STORED MEASURED VALUES X
S3
AUX. MEMORY 32
CALCULATING MOVING AVERAGE Pi
S4
CALCULATING ERROR Ri (Pi - Ao)
S5
CALCULATING FIRST DERIVATIVE Ti OF ERROR Ri
S6
CALCULATING SECOND DERIVATIVE Di OF ERROR Ri
S17
DETERMINING PROVISIONAL COMPENSATING VALUE Ui BY FUZZY INFERENCE
S8
READING IN STORED COMPENSATING VALUES U
S9
AUX. MEMORY 32
CALCULATING FINAL COMPENSATING VALUE Ui*
S10
STORING MEASURED VALUE Xi
S11
STORING MOVING AVERAGE Pi
S12
STORING FIRST AND SECOND DERIVATIVES Ti AND Di
S18
STORING PROVISIONAL COMPENSATING VALUE Ui
S13
STORING FINAL COMPENSATING VALUE Ui *
S14
AUX. MEMORY 32
S19
Ui*=0 ?
YES
NO
OUTPUTTING FINAL COMPENSATING VALUE Ui*
S15
AUTO. SIZING DEVICE 22
STORING DATA ON APPLIED FUZZY RULES
S16
AUX. MEMORY 32

FIG. 34C

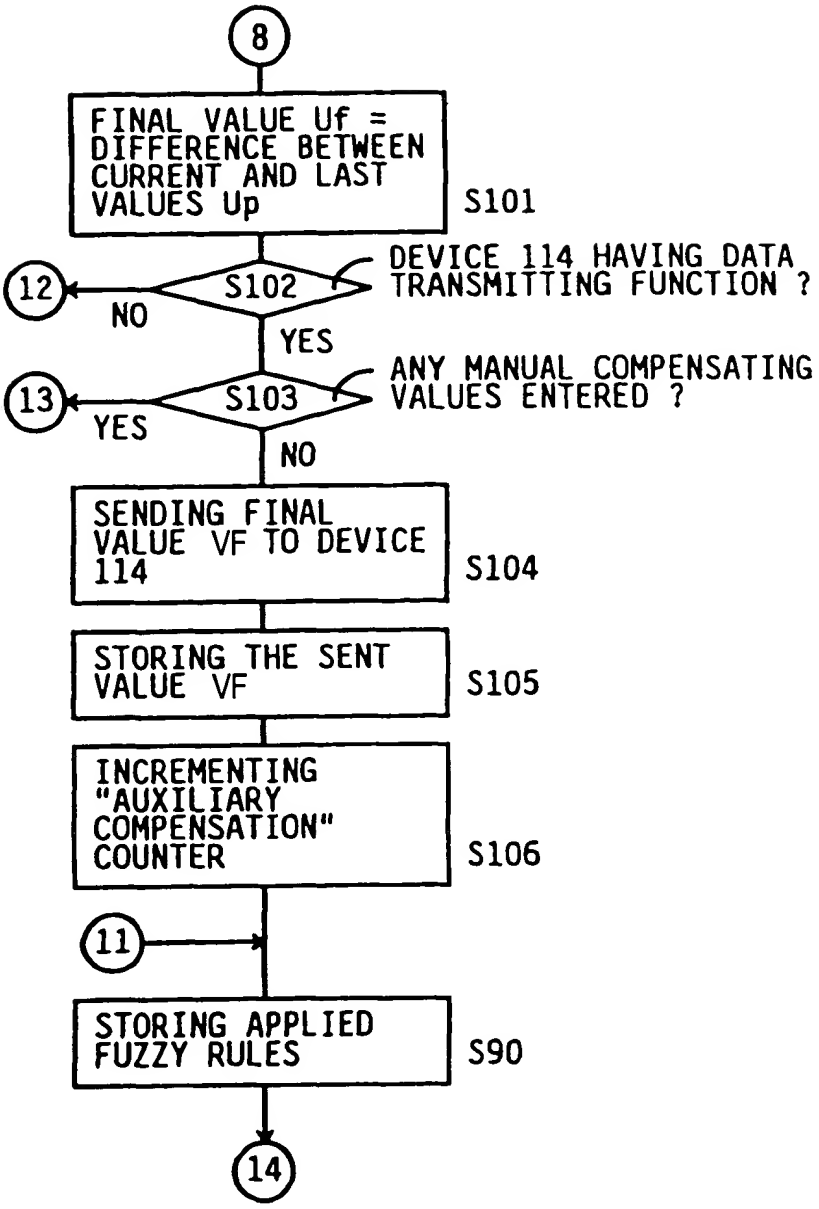
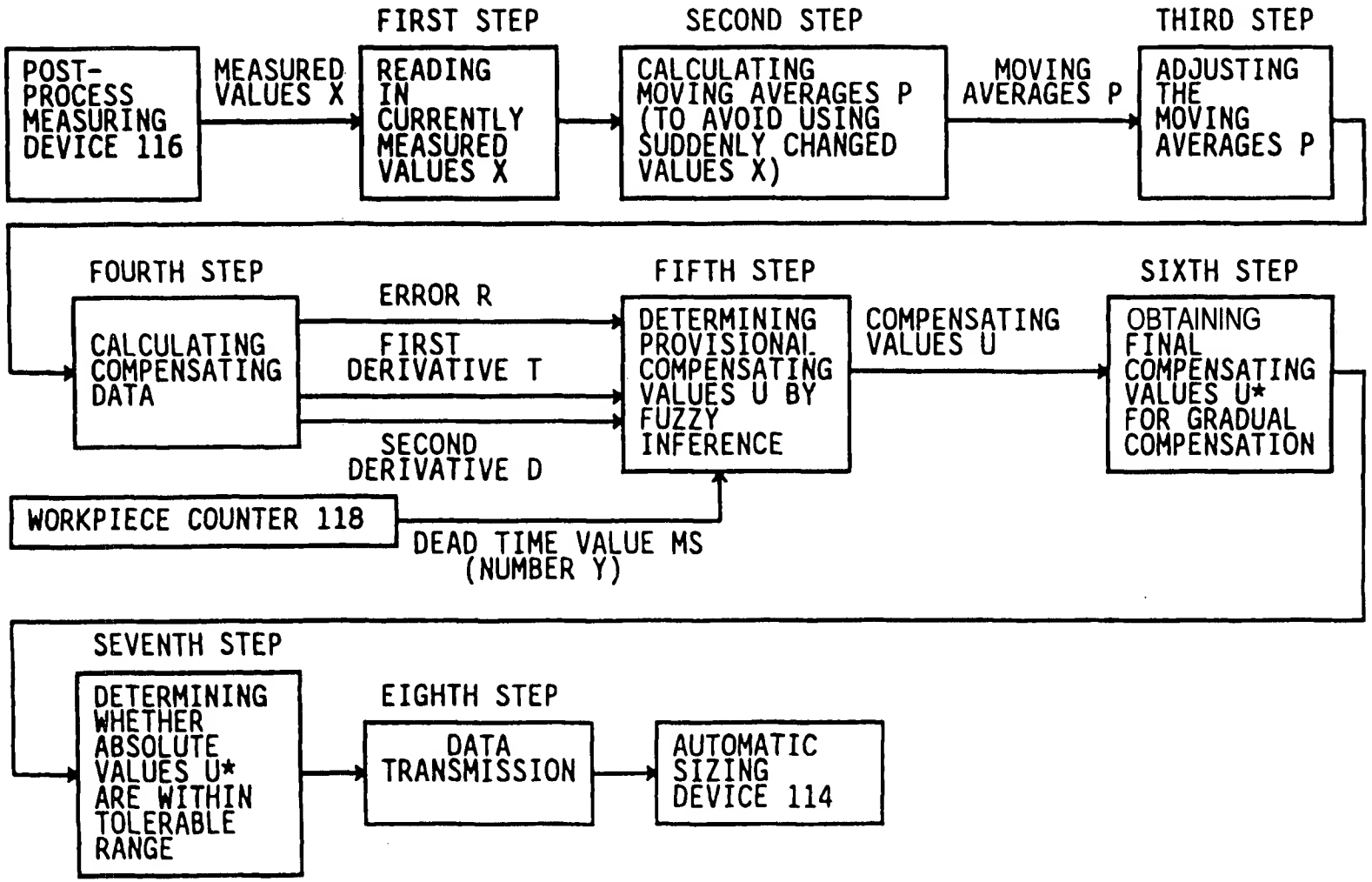

8
FINAL VALUE Uf = DIFFERENCE BETWEEN CURRENT AND LAST VALUES Up
S101
S102
DEVICE 114 HAVING DATA TRANSMITTING FUNCTION ?
12
NO
YES
S103
ANY MANUAL COMPENSATING VALUES ENTERED ?
13
YES
NO
SENDING FINAL VALUE VF TO DEVICE 114
S104
STORING THE SENT VALUE VF
S105
INCREMENTING "AUXILIARY COMPENSATION" COUNTER
S106
11
STORING APPLIED FUZZY RULES
S90
14

FIG. 36


FIRST STEP
SECOND STEP
THIRD STEP
POST-PROCESS MEASURING DEVICE 116
MEASURED VALUES X
READING IN CURRENTLY MEASURED VALUES X
CALCULATING MOVING AVERAGES P (TO AVOID USING SUDDENLY CHANGED VALUES X)
MOVING AVERAGES P
ADJUSTING THE MOVING AVERAGES P
FOURTH STEP
FIFTH STEP
SIXTH STEP
CALCULATING COMPENSATING DATA
ERROR R
FIRST DERIVATIVE T
SECOND DERIVATIVE D
DETERMINING PROVISIONAL COMPENSATING VALUES U BY FUZZY INFERENCE
COMPENSATING VALUES U
OBTAINING FINAL COMPENSATING VALUES U* FOR GRADUAL COMPENSATION
WORKPIECE COUNTER 118
DEAD TIME VALUE MS (NUMBER Y)
SEVENTH STEP
EIGHTH STEP
DETERMINING WHETHER ABSOLUTE VALUES U* ARE WITHIN TOLERABLE RANGE
DATA TRANSMISSION
AUTOMATIC SIZING DEVICE 114